MARITIME HERITAGE MINNESOTA

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2008 Nautical Archaeological Assessment of Steamer Wrecks *Swan* (21AK84) and *Andy Gibson* (21AK0109) in Aitkin, Minnesota

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Acknowledgments

Maritime Heritage Minnesota's (MHM) preliminary archaeological assessment of two Mississippi River steamer wrecks, *Swan* and *Andy Gibson*, in Aitkin, Minnesota was greatly assisted by Mary Jean Peterson of the Aitkin County Historical Society, Aitkin resident Joan Christensen, and *NewsHopper* reporter Connie Pettersen. MHM also extends thanks to Jeremy Anderson and Lilah J. Crowe of the Itasca County Historical Society for their help. MHM acknowledges Minnesota State Archaeologist Scott Anfinson, Research Archaeologist Bruce Koenen, and Minnesota National Register Archaeologist David Mather for their advice and assistance. Lastly, MHM always appreciates volunteer Kelly Nehowig for his continued assistance, participation, and support, and MHM Board Members Deb Handschin and Mike Kramer for their time and attention.

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Photographs and Graphics

MHM staff members Ann Merriman and Christopher Olson and MHM volunteer Kelly Nehowig received no monetary compensation for this preliminary work on the steamer wrecks *Swan* and *Andy Gibson*. Production costs for this report courtesy of MHM and web site hosting courtesy of MHM and the Internet Archive.

2008 Archaeological Assessment of Steamer Wrecks
***Swan* (21AK84) and *Andy Gibson* (21AK0109) in Aitkin, Minnesota**

Introduction

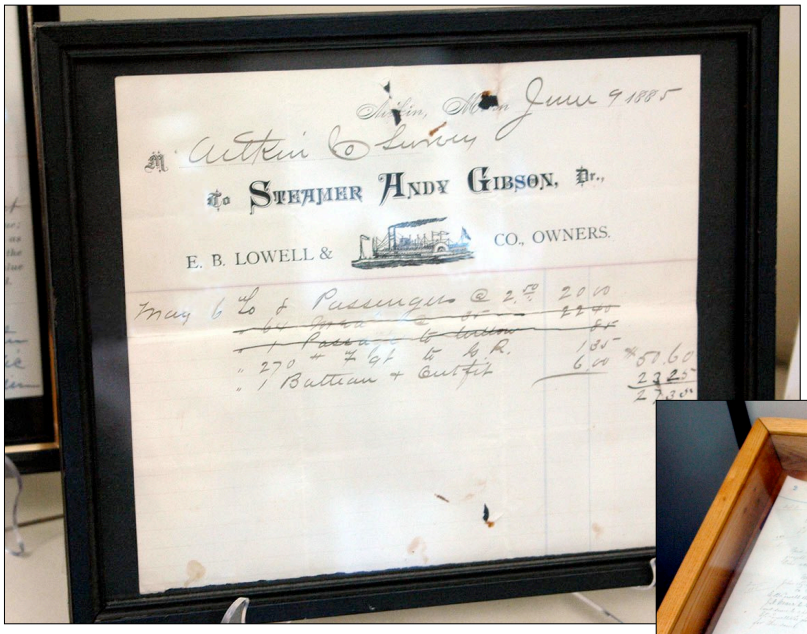
This report chronicles the activities of Maritime Heritage Minnesota (MHM) staff Ann Merriman and Christopher Olson and volunteer Kelly Nehowig in locating and assessing the steamer wrecks *Swan* and *Andy Gibson* in the Mississippi River. *Swan* is upstream of the mouth of the Ripple (Mud) River and *Andy Gibson* lies approximately 3/4 of a mile downstream from the *Swan*, in Aitkin, MN. MHM conducted this work on 30 August 2008.

Aitkin County Historical Society

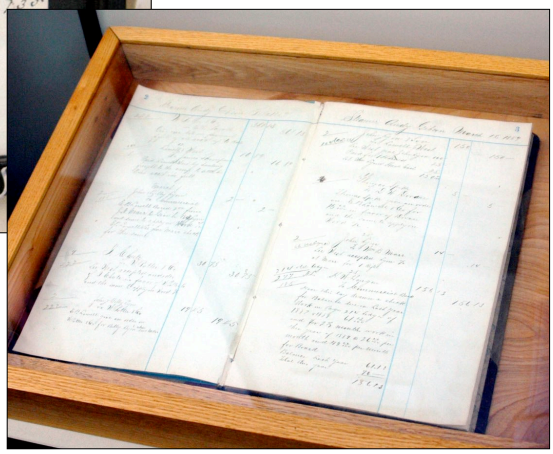
Upon arriving in Aitkin, MHM spent time in the Aitkin County Historical Society Depot Museum (ACHS) where staff member Mary Jean Peterson graciously gave of her time, providing a guided tour of their holdings. Joan Christensen stopped by to deliver a key for a security gate for MHM; she owns the piece of land that allows access to the wreck *Swan*. Mrs. Christensen gave us directions to her land and permission to drive back to the river using a simple service trail. Included in the ACHS collection are a piece of *Andy Gibson* as part of a steamboat display, other wreck pieces that may be from *Andy Gibson* or another vessel, and some primary documents that provide a look into the steamboat's working life. One framed manuscript, a receipt from E. B. Lowell and Company dated 9 June 1885, includes charges for some passengers and cargo on-loaded to *Andy Gibson* on 6 May. Another manuscript on display at the ACHS is a ledger book documenting goods on-loaded onto *Andy Gibson*. The book is open to 18 March 1889, and its other pages hold promise of an enormous amount of information that could reconstruct this steamboat's working life on the Mississippi River.

Joan Christensen and Mary Jean Peterson at the ACHS. By Kelly Nehowig.

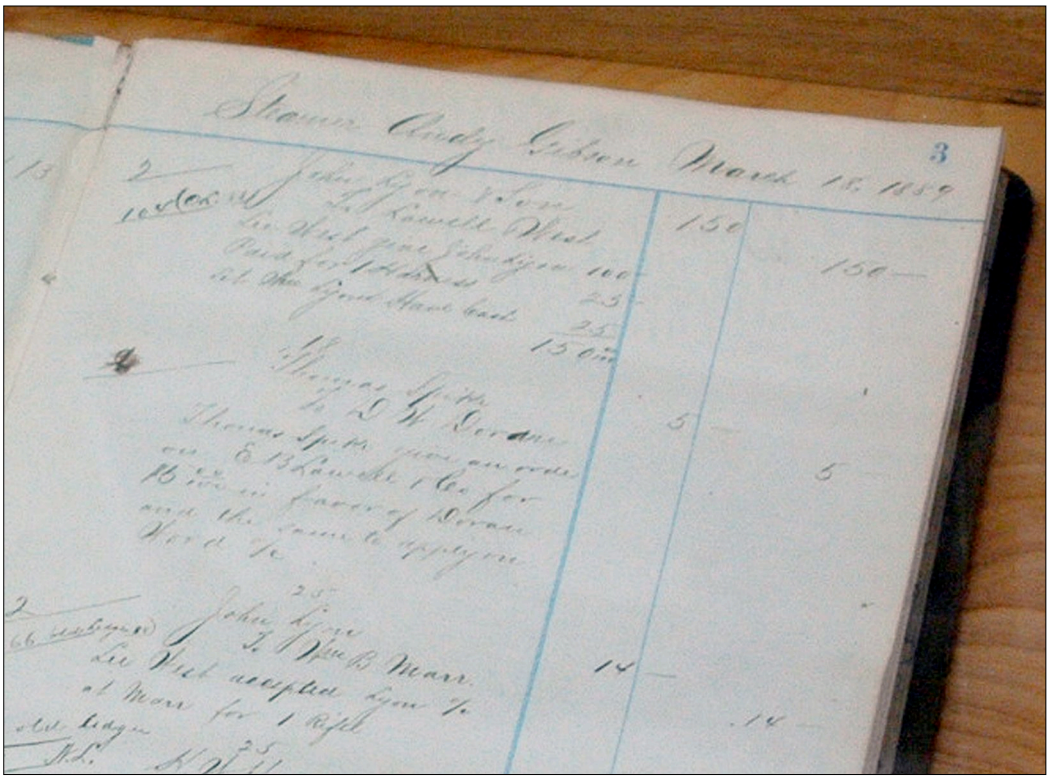
Above Left and Right: Boat part exhibits at the ACHS. By Kelly Nehowig.



Left: *Andy Gibson* receipt, 1885, at the ACHS. By Kelly Nehowig.



Right: Ledger book from *Andy Gibson*, 1889, at the ACHS. By Kelly Nehowig.

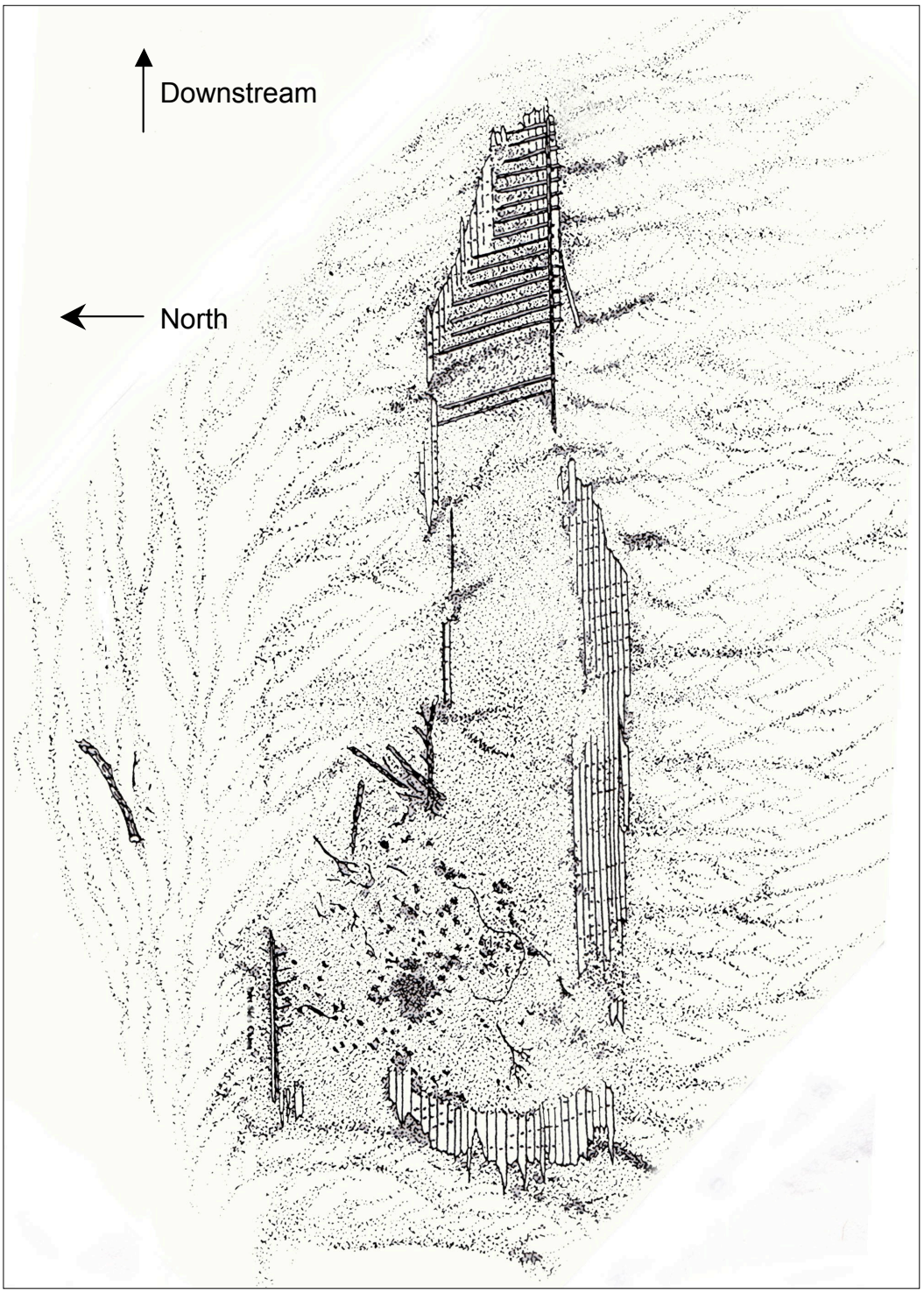


Close–up of *Andy Gibson* ledger book page. By Kelly Nehowig.

Steamer *Swan* Site (21AK84)

Swan began service on the Mississippi River in 1894 and burned at the mouth of the Ripple River in 1898. Her original size is unknown, but she was referred to as the “little steamer” (Hart 1952, 12, 14-15). *Swan* was documented in 1996 by Mid–Atlantic Technology and Environmental Research, Inc., for the Minnesota State Historic Preservation Office (SHPO). The purpose of MHM’s brief 2008 survey of the steamer was to determine the wreck’s condition since the 1996 investigation. When the SHPO initially recorded *Swan*, it measured 75 feet long and 26 feet wide with the majority of the wreck comprised of the port side hull’s flat bottom with some intact floors. Some starboard bottom planking (strakes) was extant amidships and aft, but most of the inner hull was filled with silt and rubble, so the number of frames (floors) in this area remained unknown. The starboard bow had several surviving floors and an approximately 20 foot long portion of the keelson was exposed. The bottom portion of *Swan’s* stem post survived, the keel plank was exposed in places, and approximately 10 surviving futtocks on the port side aft

indicated the boat had a hard chine with a nearly 90–degree angle bilge turn. The lightly–built steamer lay in 10 to 15 feet of water in 1996 (Hall, Birk, and Newell, 1997, 49–52).



Swan site perspective view. From Hall, Birk, and Newell, 1997, page 51, Figure 16.

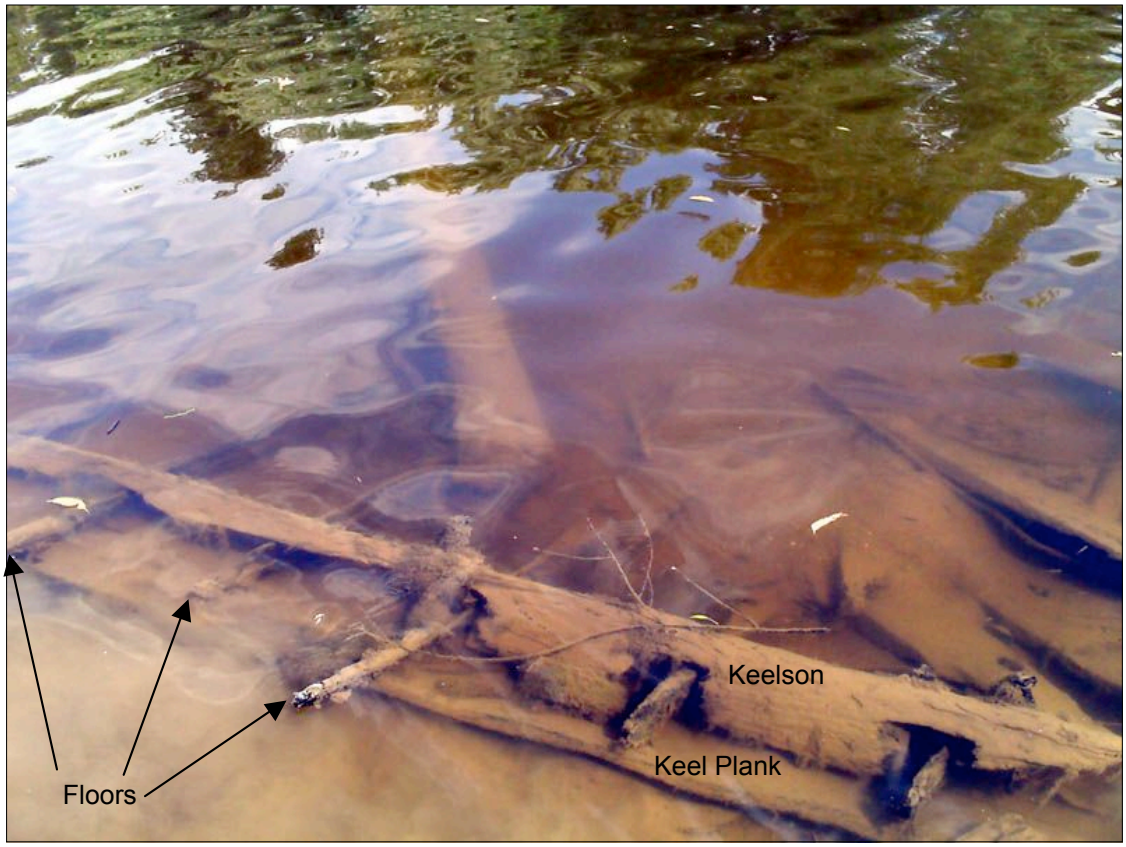
With Mrs. Christensen's guidance, MHM drove within 75 yards of the riverbank, only to be hindered by a fallen tree. Walking the rest of the way proved no problem, and we accessed the site easily. At the time of our survey, the wreck was easily located, partially exposed on the southern side of the river just upstream (east) of the mouth of the Ripple River. During our 2008 assessment, the wreck lay in a few inches to four feet of water on a gentle slope getting deeper toward the river

MHM Staff on steamer *Swan* site. By Kelly Nehowig.

channel, with a sandbar exposed to the *Swan's* starboard side. The low water level made photographing some portions of the wreck possible, but zero visibility was the case in areas deeper than one foot. As indicated in the SHPO site plan, the port side bow has *in situ* floors that are inserted into mortises in the fragmentary keelson, all which are attached to strakes. The keel plank is clearly seen under the keelson, its substantial nature in contrast to the other strakes to port. It also appears that some strakes have migrated into the bow area, in a jumble near the keelson. Beyond this

Above: Port bow with strakes, keelson, floors, and the keel plank. By Kelly Nehowig.

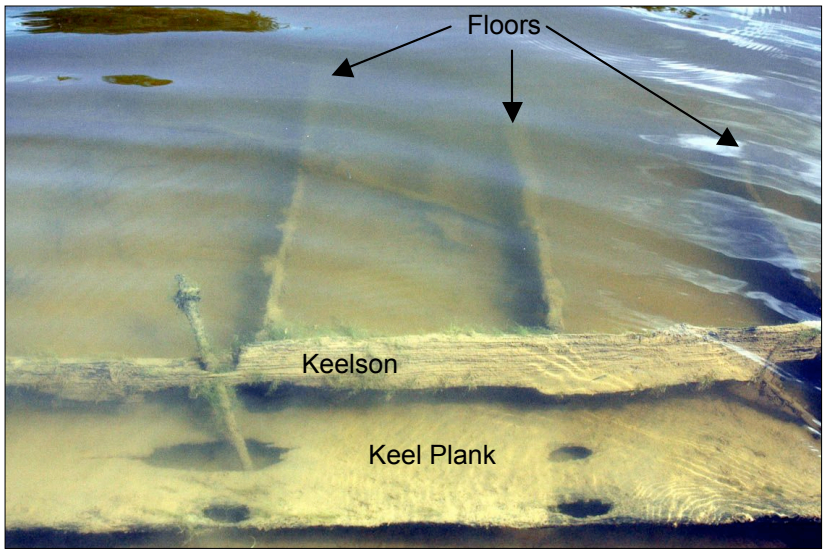
Below: Keelson with mortises to accept floors and the keel plank. By MHM.



plank movement, the bow appears to be relatively unchanged since 1996, regardless of the presence of stray logs and other debris moving around and on the wreck that may cause damage. Lastly, MHM saw no evidence of the stem post that was observed in 1996.

MHM also photographed floors and strakes originally documented by the SHPO forward of amidships in shallow water near the surviving portion of the keelson and keel plank. The floors are in varying states of decomposition, some complete and some simply surviving as bits of wood clinging to fasteners. A stringer

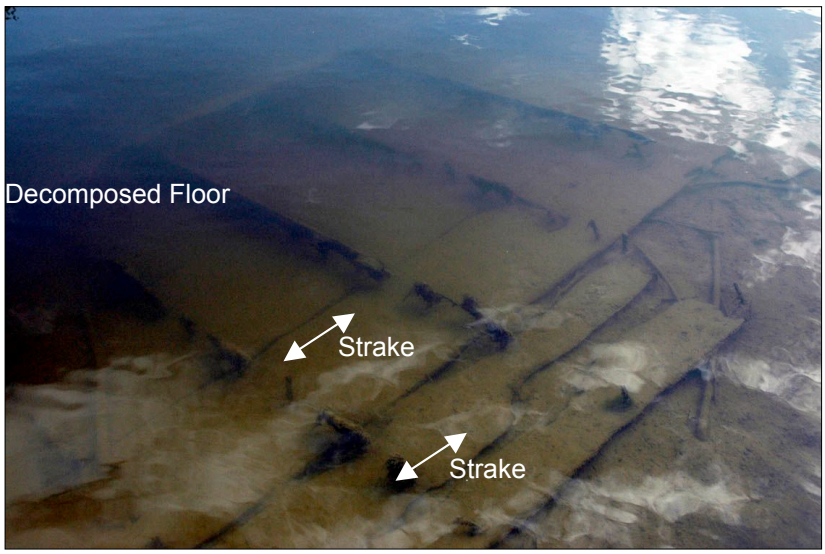
Top and Bottom: Strakes attached by iron fasteners in varying states of preservation.



Top Right: The deteriorated keelson loosely attached to the keel plank by one large iron fastener.

Bottom Right: Severely decomposed floors, some consisting of only bits of wood attached to fasteners.

By Kelly Nehowig.



is also evident further port. Several starboard strakes, that have fasteners protruding through them in patterns where floors were once attached, possibly coincide with

similar timbers documented on the SHPO site plan. With the shifting sediments over more than a decade, MHM is unsure if the observed strakes are those documented by the SHPO; if not, then much more of the wreck's starboard side has survived than previously determined. Just aft of this area, four floors are also exposed with a few inches of sediment filling the areas between them, covering the strakes. These floors

Top Right: Strakes and fasteners depicting the floor pattern; these construction attributes may be newly exposed since 1996.

Bottom Right: A series of four floors with sediment filling the spaces between them; these may be newly exposed since 1996.

By MHM.

are lower than the hull portion just forward of them, dropping a few inches somewhat abruptly; it is evident that not only does the wreck lie on a slope toward the channel,

but fore and aft as well. Again, these may be newly exposed floors not evident during the SHPO investigation.

The condition of the hull in this area clearly shows the *Swan* is resting on a slope, with strakes that are bending to conform to the riverbed, possibly exposed since 1996.

Scale in inches.

By MHM.

Further aft it is apparent that portions of the wreck have been further exposed since the SHPO documentation. Shifting sediment or ice movement has revealed two additional starboard strakes and two floors that were not visible during the initial

Starboard strakes and floors exposed since 1996.

Scale in inches.

By MHM.

examination. The starboard ends of these floors are now out of the water, but both extend into the river and are lodged into the sediment. Further, several iron fasteners are protruding from the sandbar between the two exposed dry strakes indicating that more timbers lie beneath *in situ*. Some of the fasteners attached the two dry floors to the dry exposed strakes and buried strakes based on their positions. The placement of these strakes and floors is significant since the SHPO

Starboard strakes and floors on an exposed sandbar with iron fasteners protruding through sediment attached to buried strakes. By MHM.

site plan has no starboard floors extant, and there are a significant number of starboard strakes still undocumented under the sediment, and possibly floors as well. It must be noted that some force–ice, water, or moving debris–dislodged these exposed strakes but left others *in situ*.

The wreck's port side is still mostly buried in sediment, as in 1996, but the aft turn of the bilge as depicted on the site plan was easily found. MHM also located some hogging chains loose inside the hull. The amidships portion of the *Swan* was difficult to examine because of large moving detritus littered around the site, mostly

cut logs shifting loosely around the area. At the time of documentation, may logs had lodged themselves in sandbars at the mouth of the Ripple River just downstream of the wreck, impeding river movement.

Archaeological Evidence Near *Swan*

MHM conducted a brief visual survey of the riverbank downstream of *Swan*, west of the mouth of the Ripple River, in areas that under normal river levels would be submerged. Various ceramic, glass, and metal artifact scatters are evident and a substantial, concentrated pile of bricks is set into a sandbar. The possible remains of

Ironstone crock bottom, metal ring and glass bottle bottom, iron fasteners, possible dock remains, and brick pile. By MHM.

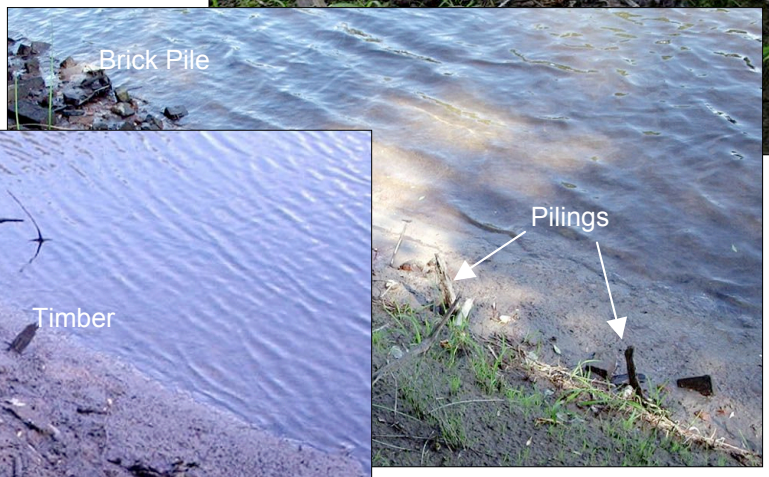
a wooden dock or docks protrude from the riverbank as do a series of metal cables and a large beam extends deeply into the sediment. Two pilings that may be

supports for a dock stick up from the river bottom, and two worked wooden planks imbedded in a sandbar along with a perpendicular beam and metal pipes suggests the may be a buried wreck or a dock.

Above: Iron cables in the riverbank during low water conditions.

Right: Possible worked beams imbedded in sandbar.

By MHM.



Above: Two pilings next to a brick pile that may have been part of a steamboat mooring or dock.

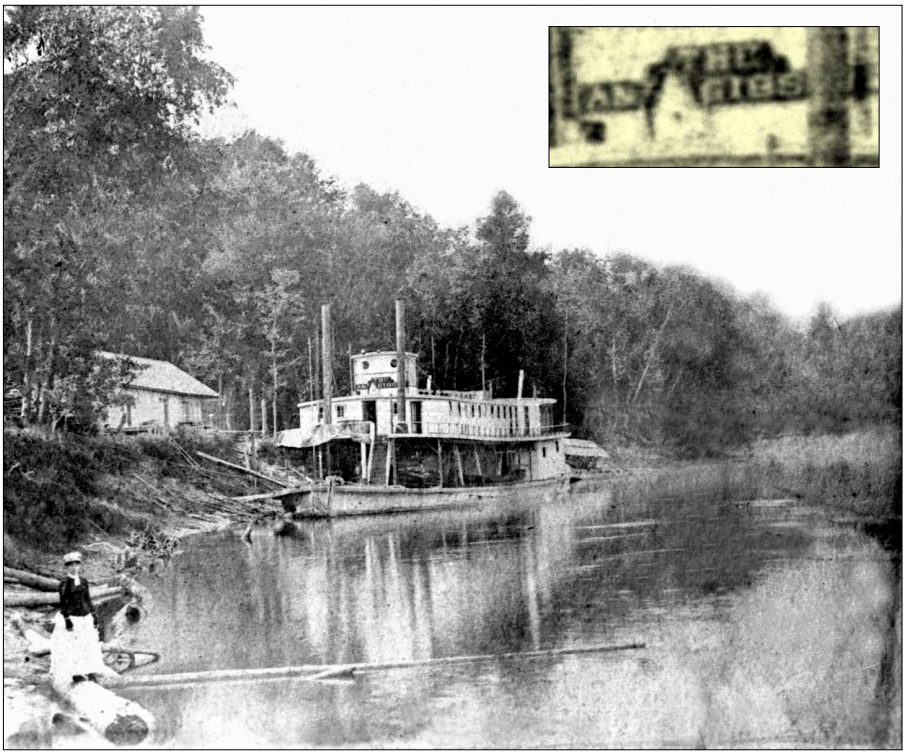
Left: Two worked planks imbedded in a sandbar at low water, with a possible timber protruding from the mud.

By MHM.

Steamer Site *Andy Gibson* (21AK0109)

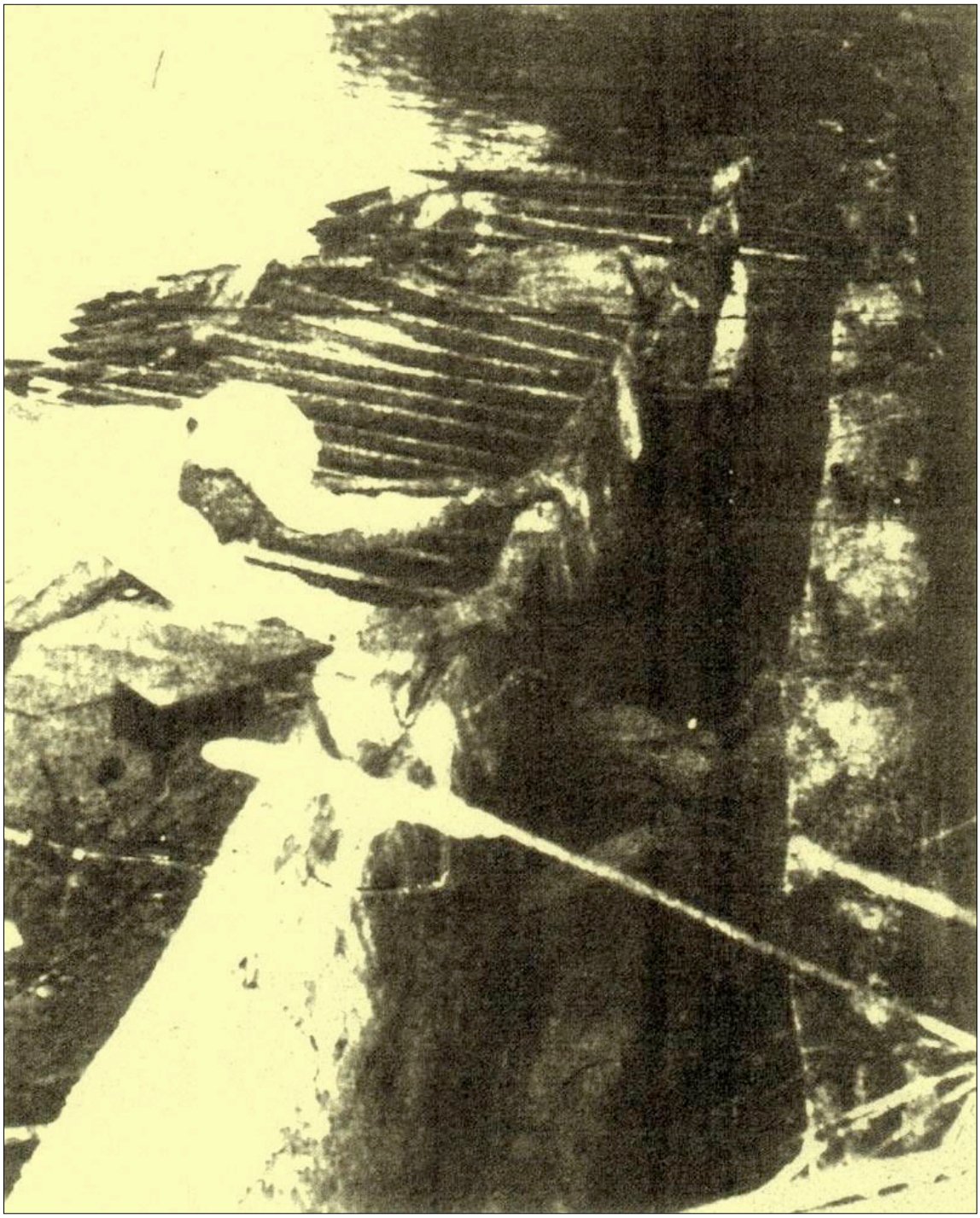
After MHM investigated *Swan* and the areas downstream, we returned to the ACHS Depot Museum where Mary Jean Peterson joined us, and we followed her to the *Andy Gibson* site. The wreck lies southwest of the City of Aitkin sewage disposal facility. To reach the Mississippi, one drives through the public compost drop–off area and onto a path in the woods. From there, it was an easy walk on a footpath to the river where the wreck lay exposed, easily visible extending out of the riverbank and into the shallow water. The bank is somewhat steep, but no trouble was encountered when climbing down to the wreck. MHM took numerous photographs of the site over–all and many construction attributes in particular, as well as some preliminary measurements for comparison to *Swan*.

Andy Gibson was constructed in 1883 and went into service in 1884. She measured 130 feet long and 32 feet in the beam, with a 2–foot draft when fully loaded; her actual depth of hold is unknown. During her working life, *Andy Gibson* was lengthened to over 140 feet, making her the longest steamer to ply the Mississippi River between Aitkin and Grand Rapids (Hart 1952, 12). Over the last four decades, the wreck has been exposed by low water conditions in 1967, 1977, 1988, 1998, 2006 (Pettersen 2006, 8), and 2008, with confirmed looting occurring in 1967 and 2006. During the September 1967 exposure, the wreck's port and center rudders



Andy Gibson moored on the banks of the Mississippi River. Inset: *Andy Gibson* nameplate.
Courtesy of the Itasca County Historical Society.

were removed. It was reported that they were to be presented to the city for display at the Aitkin County courthouse, but MHM has not confirmed this action.



Aitkin County Historical Society representative Tony Klee investigated *Andy Gibson* in September 1967 during low water conditions. MHM is hopeful that the large beams on the right side of the photograph and in Klee's hands exist buried under the riverbank. From the *Aitkin Independent Age*, 20 September 1967.

Photographs taken in August 2006 during low water conditions indicate the starboard rudder was still in place and an area about 25 feet forward of the stern was intact. Photographs taken in September 2006 show the starboard rudder was

Right: The starboard rudder and metal attachments *in situ*.

Below: View from beyond the stern with the starboard rudder *in situ* and forward portion of the hull still intact.

By Connie Pettersen
in August 2006.

cut off the wreck by a souvenir hunter in August or September. Also during this time period, a section of the hull was removed by a chainsaw.

Above: Stern view after the unauthorized removal of the starboard rudder and its attachments.

Below: View toward the stern indicating five floors and numerous strakes have been removed with a chainsaw; note the sharp edges to the floors.

By David Mather in September 2006. See an analysis of the removed rudder in Appendix A.

In August 2008 the wreck measured approximately 132 feet long, having sustained damage to the stern with the removal of the sternwheel at some point since 1892 and the looting of the rudders. The wreck has suffered from many years of erosion by ice and water action and MHM approximates the width of the site to be 40 feet, but this guess must be confirmed since the wreck is broken with the majority of the port side lying on a slope toward the river's center. No decking or deck beams have survived in the exposed areas of the wreck, and the keel plank is not visible, remaining under sediment and water. Starboard strakes, floors, and stringers are visible along the hull's length, with much of the wreck embedded in the riverbank and covered with soil. The majority of the port side is disturbed and lying on a slope in the river, with strakes, floors, and stringers visible.

An interesting feature of this archaeological site is the presence of eight wooden pilings protruding through the wreck's bottom, essentially impaling it approximately along its centerline as evidenced by the dislodged keelson at the bow near one of these supports. An additional three pilings evident in deeper water, supposedly on the wreck's port side or possibly protruding through the wreck as well. Several large timbers rest under the hull in line with the eight pilings, although some have been dislodged over the years and lie haphazardly under the wreck. MHM suggests that a structure comprised of large pilings and timbers, basically a dock without deck planking, acted as an underwater platform for *Andy Gibson* to rest upon during times of low water to prevent hogging and sagging. Steamer *City of Aitkin* sank at her moorings in 1883 due to low water when she hit bottom and began to list (Hart 1952, 11). It seems *Andy Gibson's* owners learned from this example and in the end, created a unique archaeological site. The existence of the platform increases the complexity, significance, and remarkable nature of this site, adding a stratographic layer not previously anticipated. Further, a large piling with bark at its base is imbedded into the riverbank higher on the river's bluff. It is possibly a remnant of the steamer's original mooring place and may simply be a cut tree.

As previously mentioned, in addition to the stern damage caused by the removal of the starboard rudder in 2006, it is also evident that a significant amount of intentional damage was inflicted on the wreck amidships by a souvenir hunter. Five

floors extending out from the riverbank have been cut and now have straight ends. Additionally, an undetermined number of floors are missing forward of the cut examples. It is unknown if these floors were looted from the wreck or if they fell victim to ice and water action. This area is now unstable because of the looting of the aft section and the area where the hull was removed is quickly eroding. Regardless, MHM suspects remnants of these timbers might exist under the riverbank on the starboard side, possibly including first futtocks and a hard chine. One amidships section has migrated from the main wreck and slipped into the river that resembles the looted area of the hull. This hull piece is intact approximately five feet further down the river's slope and consists of several strakes and floors.

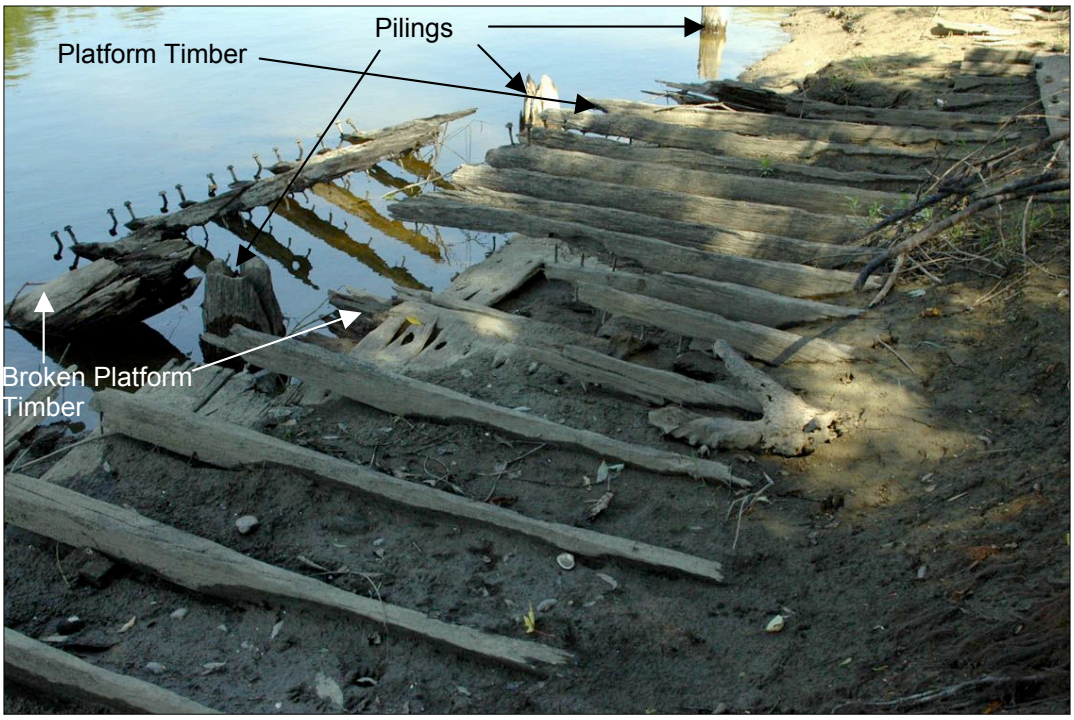
Above: View of *Andy Gibson* looking toward the stern. The bow is just out of the photograph to the right. Note the pilings through the wreck and the exposed stringer.

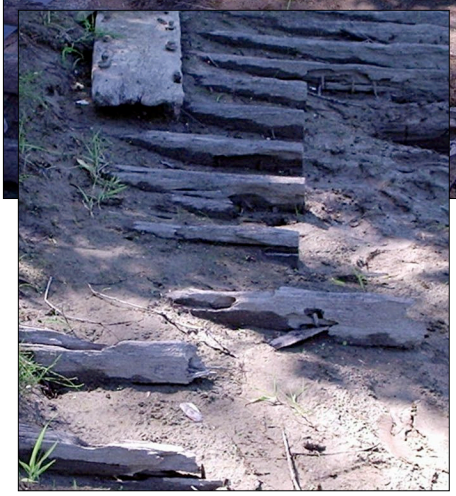
Inset: A close–up of the area, just forward of amidships.

By MHM.

Above: The amidships section of the *Andy Gibson* with the pilings and timbers of the under hull platform evident, and a large section of hull that has slipped further into the river. By Kelly Nehowig.

Below: The bow of the *Andy Gibson* is a few feet forward of the piling. It appears the piling, which has pushed through the hull, dissected the keelson and pushed it upward. By MHM.





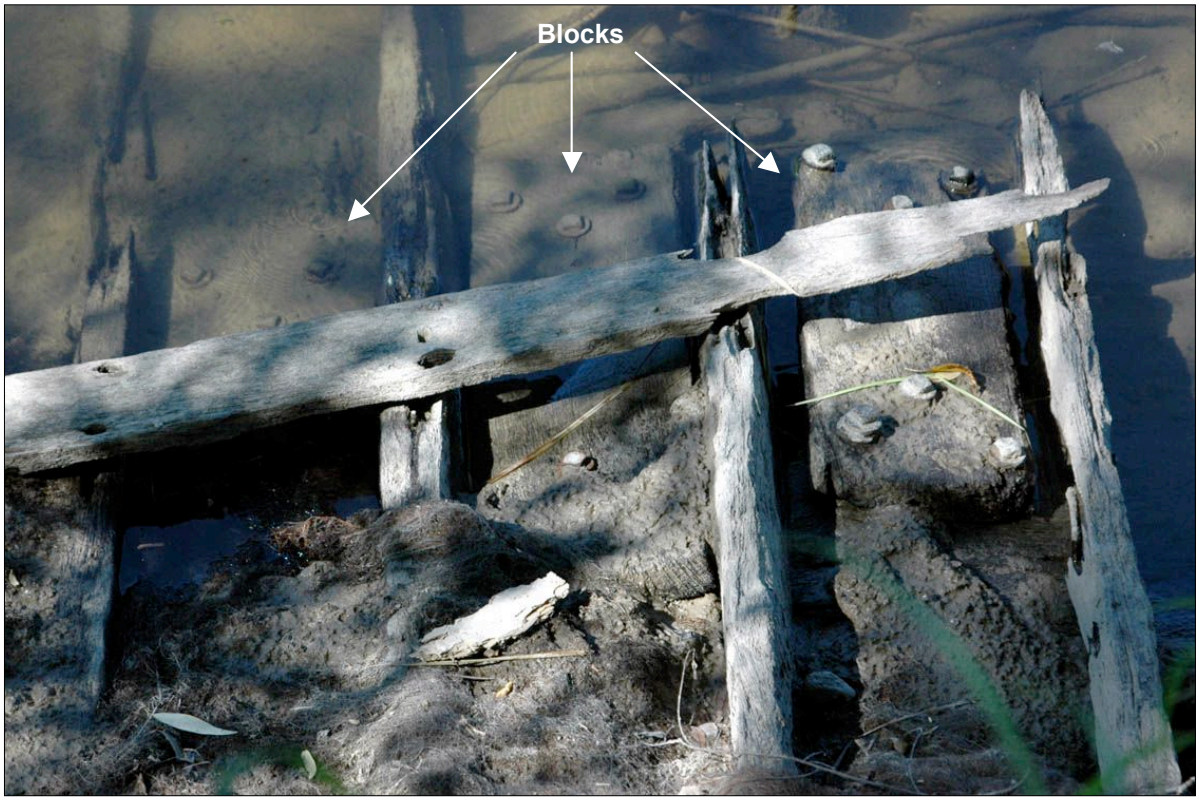
Top: Stern section in August 2008 with floors in varying states of preservation, with platform pilings and timbers evident, and a large stringer with substantial fasteners. By Kelly Nehowig.

Above Right and Inset: Looted and destabilized areas in August 2008. By MHM.

Above Left: Possible riverbank mooring. By MHM.

MHM took measurements of several floors and the distance between them to determine if their size was uniform and for comparison to the steamer *Swan*. In general, the floors were 4.50” molded and 3.00” sided, with wider floors further forward (23rd floor from the stern) with offset futtocks that measured 6.00” molded and 2.50” sided. At the stern, the space between the floors measured from the floor centers is 16.00”, while at the seventh floor from the stern the distance is 14.00” and from the ninth floor it is 12.00”. A visual inspection of the hull’s strakes indicates they are of various widths and thickness. The widest strake visible measured 17.00” wide, with others measuring 15.00” and 10.50”. Their thicknesses varied from .75” to 1.25”. The SHPO measured *Swan’s* surviving (and damaged) floors to be 2.50” molded and 1.00”–1.25” sided, attached to 1.25” thick strakes (Hall, Birk, and Newell, 1997, 52).

Approximately 20 feet aft of the bow on the starboard side, three blocks are attached to the strakes with 6 large bolts set between four consecutive floors, seemingly as hull reinforcements or possibly a repair. The most forward block



Three blocks with large fasteners that may be hull reinforcements or a repair. By MHM.

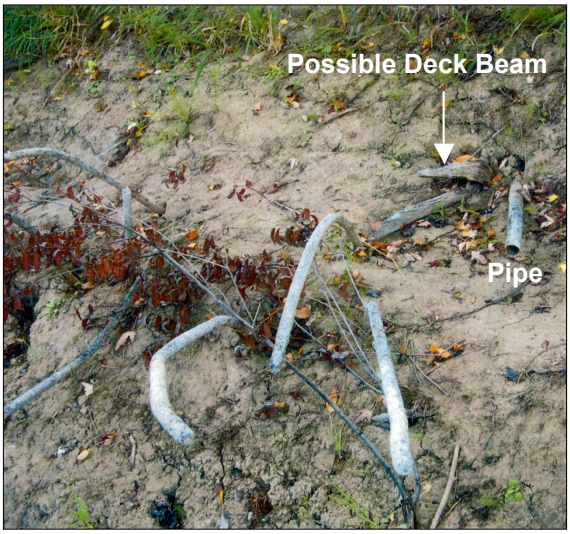
measured 21” long, 8.5” wide, and 1.5” thick. At the stern, Olson and Nehowig cleared a small portion of the soil where the starboard rudder had been removed in an attempt to clarify the amount of the wreck that may lie underneath the riverbank. They discovered a large structure *in situ* that may be the starboard cylinder timber for the now–missing sternwheel. Finally, various iron fasteners are visible throughout the wreck site, imbedded in floors, strakes, stringers, and blocks. Large engine mountings are protruding from the riverbank; near these mountings some deck timbers may survive as well.

Above: Olson and Nehowig at the stern. By MHM.

Left: Two large bolts with washers protruding from a floor. By Kelly Nehowig.

Below: Fasteners protruding from floors. By Kelly Nehowig.

Several large metal rods, probably engine mounts, and a possible wooden deck beam protrude from the riverbank approximately 20 feet forward of the stern. These construction features must be investigated more thoroughly and MHM is hopeful that a substantial portion of the starboard side hull is extant under the riverbank. Also visible is a metal pipe that may have been engine–related. By David Mather.



On 15 November 2008 MHM returned to Aitkin and the *Andy Gibson* wreck site in order to monitor the site. Rain and snow upstream has raised Mississippi River water levels and low temperatures produced ice on the riverbank over the wreck. The river was flowing somewhat swiftly and ice floes were common. Thicker ice later in the winter season could pose a danger to the wreck. By MHM.

Conclusion

The brief nautical archaeological survey of the steamer wrecks *Swan* and *Andy Gibson* conducted by MHM in August 2008 represents a preliminary assessment for Cultural Resources Management purposes. The potential for the location and investigation of other nautical and underwater archaeological sites in the Upper Mississippi River will only be fulfilled with further field and historical research. Further study is required to ensure that the cultural heritage of this virtually untapped Minnesota resource is preserved for future generations and understood by our own. With this goal in mind, the MHM staff has several suggestions to locate, document, and preserve the cultural resources of the Mississippi River in Aitkin and Itasca Counties in keeping with accepted ethical standards and practices within the discipline of archaeology.

MHM plans to conduct a Phase I pre–disturbance archaeological side imaging sonar survey of the Mississippi River from the western border of Aitkin County to the Itasca County border west of Lake Winnibigoshish and Grand Rapids, including northern areas of Cass County. This approximately 225–mile portion of the river has meandered and shifted substantially over time, creating a number of oxbow lakes. Many oxbow lakes are now dry, while some are swampy and others pond–like. Also included in this work is the Phase II documentation of the steamer *Andy Gibson* (21AK0109), with additional recording of steamboat *Swan* (21AK84).

This comprehensive survey of one portion of the Mississippi River will be of great value to the staff of MHM in establishing a database that will record the nautical construction attributes of steamboats, flatboats, ferryboats, launches, and any other watercraft that may be lying on the river's bottom. MHM will maintain and use this database to produce archaeological site reports and histories for each wreck, landing, boatyard, or dock identified, as well as other minor sites comprised of artifact scatters or small features. The database and reports will be available to interested scholars, students, and researchers free of charge through MHM's web site and the Internet Archive (IA), a site that offers free, unlimited server storage.

Historians interested in the maritime, social, economic, and commercial history of Upper Central Minnesota will find the results of this survey valuable. For

example, maritime historians specializing in nautical technology will use this information for comparison to vessels and wreck sites with similar construction to determine trends in boat design. Social historians will use the survey information to construct models of interaction between towns, cities, and settlements on the river. Economic and commercial history scholars focusing on the movement and exchange of goods and services will recognize the vital link between watercraft, the river, and the sustainability of the communities that depended on them. With this research it must be acknowledged that the watercraft constructed to ply the Upper Mississippi in Minnesota were design to specifically function within the parameters that the geography of the river dictated and for whatever purpose their builders required. Other scholars interested in genealogy could research their family's maritime history through historical documents and possibly link individual river wrecks or landings to their ancestor's business.

MHM plans to organize programs with ACHS that involves local kids at the elementary, middle, and secondary school levels who will benefit from this research through hand–on participation in wreck documentation with the *Swan* and *Andy Gibson* (depending on safety and the river water levels). MHM will also design a digital classroom packet for teachers to educate their students about Mississippi River wrecks and other submerged cultural resources discovered during this survey, to be available for download on MHM's web site. College and university students in the humanities at the undergraduate and graduate levels conducting research into particular watercraft, shipping history, nautical technology, riverine archaeology, alluvial studies, geography, or commercial, maritime, and economic history will benefit from this study. As a comprehensive resource, the data and reports produced from this survey will encourage students of higher education to pursue avenues of related research in the archives of large and small Minnesota historical societies, libraries, and local museums. Further, American citizens from all geographic regions, occupations, and educational levels can use this information to learn about shipwrecks and the stories that archaeology can tell through their study.

The scope of this research encompasses the location of underwater archaeological sites in a defined section of the Mississippi River that measures

approximately 225 miles in Aitkin, Itasca, and Cass Counties. Once sites are defined, determining the possible identification of any wrecks located may be possible. Through research, MHM has determined there may be at least four potential steamer wreck sites between Aitkin and Grand Rapids, not including *Swan* and *Andy Gibson*. For example, the steamer *City of Aitkin* was launched in 1878 and sank at her moorings during low water in 1883. She was recovered that year and continued her service on the river. *City of Aitkin* was reportedly re–built to reduce her draft and may have been re-named *George H. Houghton*. This steamer was launched in 1886 by the Houghton Line, owners of the *City of Aitkin*. In 1889 *George H. Houghton* caught fire and was destroyed when docked 20 miles upstream from Aitkin. The steamboat *Fawn*, launched in 1882, operated on the river until 1894 when she hit a snag and sank near the mouth of the Swan River. In 1895 steamer *Walter Taylor* began working on the Mississippi and in 1897 near the mouth of the Sandy River, she sank due to her being over–loaded with cargo, but was raised that season. She continued her service until 1899 when she sank near the mouth of the Ripple River.[1] Steamboat *Irene 2*, 1902–1909, sank twice during her last two seasons on the river after which she was dismantled; some of *Irene 2's* components were incorporated into the steamer *Lee*. *Lee* operated on the river between 1911 and 1921 until she sank near Gyde's Mill. She was raised and cut down to her hull[2], becoming a ferry in Verdon Township (Hart 1952, 11–19). However, the ferry *Lee* may have also worked at Wold's Ferry Landing upstream from Aitkin since the bottom of a cut down steamer was spotted rotting on the riverbank there in 1952. By July 1953 this hull was gone, presumably having been swept away during high water conditions (Burtnett 1953, 11).

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[1]Mrs. John Schroeder of Aitkin reported that her "husband worked at Gyde's mill and saw the *Walter Taylor* sink at the mouth of the Mud River. It sprang a leak and Mr. Cluff went down every day for a month to bail it out, hoping they could save it, but it sank, and in a few years was covered with sand." Mrs. John Schroeder, Aitkin, MN, to Prof. I. H. Hart, McGregor, MN, 3 September, 1948. Typed copy. Irving Hart Letters Received, 1928, 1948, Manuscript Collection, Minnesota Historical Society, St. Paul.

[2]Concerning the *Lee*, Mamie Nelson reported "As to the boats final end I do not know. Marcus sold it to some one beyond Libby as a ferry boat and the superstructure was taken off." Mamie B. Nelson, Big Sandy Lake, MN to Mr. Irving H. Hart, McGregor, MN, 30 August, 1948. Typed copy. Irving Hart Letters Received, 1928, 1948, Manuscript Collection, Minnesota Historical Society, St. Paul.

Several other steamers worked the waters of the Mississippi River in Aitkin and Itasca Counties between 1858 and 1918 including the *North Star/Anson Northup*, *Pokegama*, *White Swan*, *Irene 1*, *Remnica*, *Atlas*, and *Oriole*. These steamers met various fates such as being burned, dismantled, or moved to other bodies of water. One of the more interesting tales is that of *Oriole*, when in 1918 she was hauled on shore at Big Sandy Lake and modified into "The Ark" hotel (Hart 1952, 9–11, 16–18).

The steamer *Oriole* transformed into "The Ark" hotel on Big Sandy Lake. From the "Lerbs Cabin on Big Sandy Lake MN" web site.

By 1915 approximately 20 small privately–owned gasoline launches (Hart 1952, 18) challenged the two remaining larger boats, *Oriole* and *Lee*, providing flexibility and independence for Aitkin and Itasca County citizens in regards to river travel. The numbers of these smaller boats increased greatly during the first part of the 20th Century and this survey may locate some of these hulls as well. Further, at least 25 recognized steamboat landings consisting of docks, piers, and stone with wood cribbing, existed between Aitkin and Grand Rapids (Hart 1952, 9, 18), providing more potential archaeological sites.

A stone and crib steamer landing near the mouth of the Sandy River. Photograph by Evan A. Hart , July 1949. From Hart 1952, 18.

Information obtained from historical documents held by the ACHS, particularly the aforementioned ledger book and receipts of *Andy Gibson*, provide historical context to the physical remains of the steamboat. These records provide specific details concerning cargo carried on board the steamer, prices paid for these goods

and their transport, and charges for passenger service. Supporting documents at the ACHS, such as steamer schedules and photographs, further places *Andy Gibson's* activities into the history of the Mississippi River, Aitkin, and Grand Rapids. Contemporary accounts of steamboat excursions, schedules, watercraft accidents, groundings, and boiler explosions are found in local newspapers. These sources are important since they often provide the only published reports for these activities and incidents. Further, through research into the holdings of local historical societies, manuscript collections, and archives, previously unknown documents may be located. Records such as family letters and diaries may be accessed, providing context to sites and wrecks located during the side imaging sonar survey and the published accounts of accidents and groundings. Digitization and the subsequent uploading of these record types to the internet not only preserves them, allowing their study without physical contact with the original document, but facilitates their use by a wider audience.

Culture Resource Management Plan

1. Conduct a Phase I side imaging sonar underwater archaeological survey to systematically search the Mississippi River to identify sites, features, and artifacts to address the central research questions to be answered during this fieldwork:
   - How many steamer, flatboat, and ferry wrecks exist and what are their GPS and latitude/longitude coordinates
   - What is the condition of these wrecks and what are the potential threats to them
   - Which sites should be the focus of Phase II documentation
   - If wrecks are discovered, will it be possible to identify them
   - Identification of steamboat landings, ferry crossings, and docks

   MHM will prepare paperwork for the OSA to assign the individual sites identification numbers.

2. Complete the Phase II documentation of all terrestrial and underwater archaeological sites and features identified during the Phase I survey:
   - Priorities are *Andy Gibson* and further recording of *Swan*
   - Site monitoring over time, especially during low water conditions
   - Primary resource historical research
   - Digitization and uploading of primary documents onto the internet

3. Phase III excavations of targeted sites to be determined after the completion of Phases I and II:
   - *Andy Gibson* will be completely exposed from the riverbank to document the condition of its starboard side–reburial for preservation will occur

4. Cataloging – Databases will be created to document:
   - Steamer wreck sites in order to create a typology of Upper Mississippi River steamboat construction for Minnesota
   - Artifact collection will be kept to a minimum and is dependent on conservation and storage concerns; however, documentation and cataloging and re–burial of objects will be conducted

5. Conservation:
   - Stablization of archaeological features and artifacts
   - Proper treatment of small finds–ceramics, wood, glass, metal when collected
   - Proper artifact storage in controlled conditions

6. Historic Preservation:
   - Possible nomination of sites to the National Register of Historic Places

7. Publication and Public Education:
   - Site Report for Minnesota State Archaeologist
   - Site Report for the Minnesota State Historic Preservation Office
   - Site Report and continual updates for Maritime Heritage Minnesota and Internet Archives web sites

- Publication of a book detailing a typology of Upper Mississippi River steamboat construction as developed by the documentation of wreck sites that allows the creation of a steamer attributes database
- Presentation of papers at the annual Society for Historical Archaeology and Underwater Proceedings and American Institute of Archaeology conferences, among others
- Traveling exhibit of side imaging sonar graphics, site plan graphics, and survey findings (and possibly artifacts) for events such as Archaeology Week at Fort Snelling; special talks and lectures for the Aitkin, Grand Rapids, and Twin Cities areas
- Community Education through class and field work for adults and children

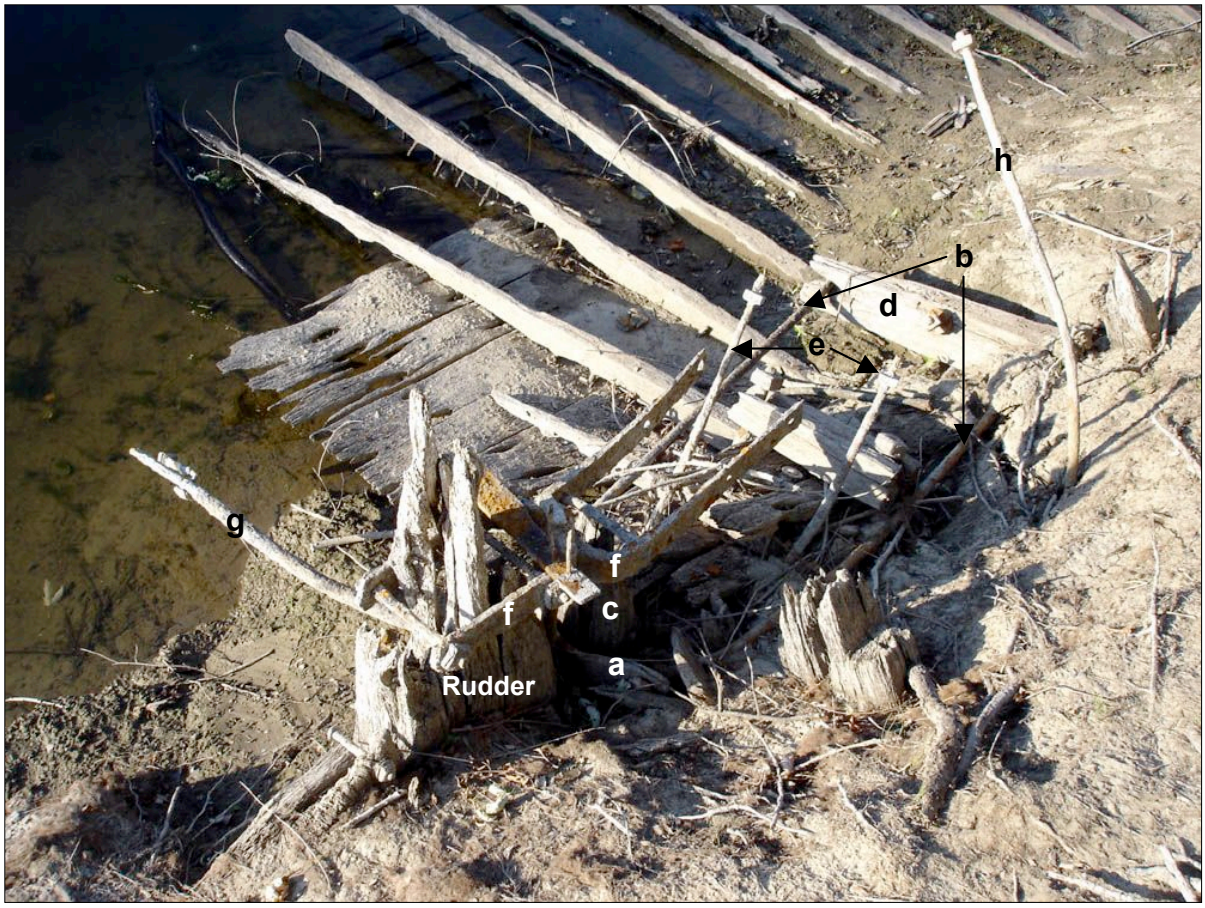
Appendix A

Andy Gibson's Starboard Balanced Slave Rudder

When *Andy Gibson's* starboard rudder was removed in August or September 2006, much of the extant attachment hardware was also taken. David Mather documented the rudder, taking several photographs and measurements. When *in situ*, much of the rudder's iron and wood mounting system was in place; upon removal, this mechanism was disturbed and its reconstruction proved difficult. However, MHM has attempted to make sense of the remains through photographic evidence taken by Pettersen and Mather before and after the looting (see below).

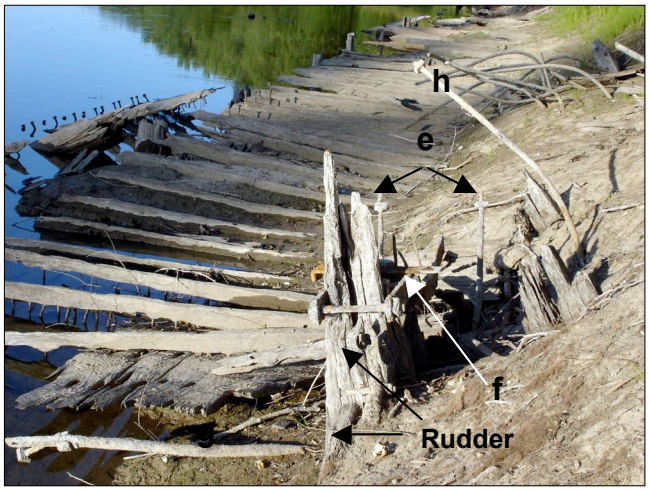
A metal plate (a) with two holes on either end supported two rods (b), approximately four feet long. From the available evidence, the plate was attached to the starboard sternpost (c), the top of which seemingly hasn't survived after removal, just forward of the rudder; there may be a skeg underneath the hull, but this cannot be determined at this point. The rods extended forward on either side of the sternpost and their ends were attached with bolts through holes in an athwartships beam or block (d). The purpose of the plate and rods seems to be as a stable attachment point for the sternpost. Another set of rods stuck out of the sediment with bolts near their ends (e). These rods were attached at an approximately 45–degree angle to a piece of the sternpost or skeg.

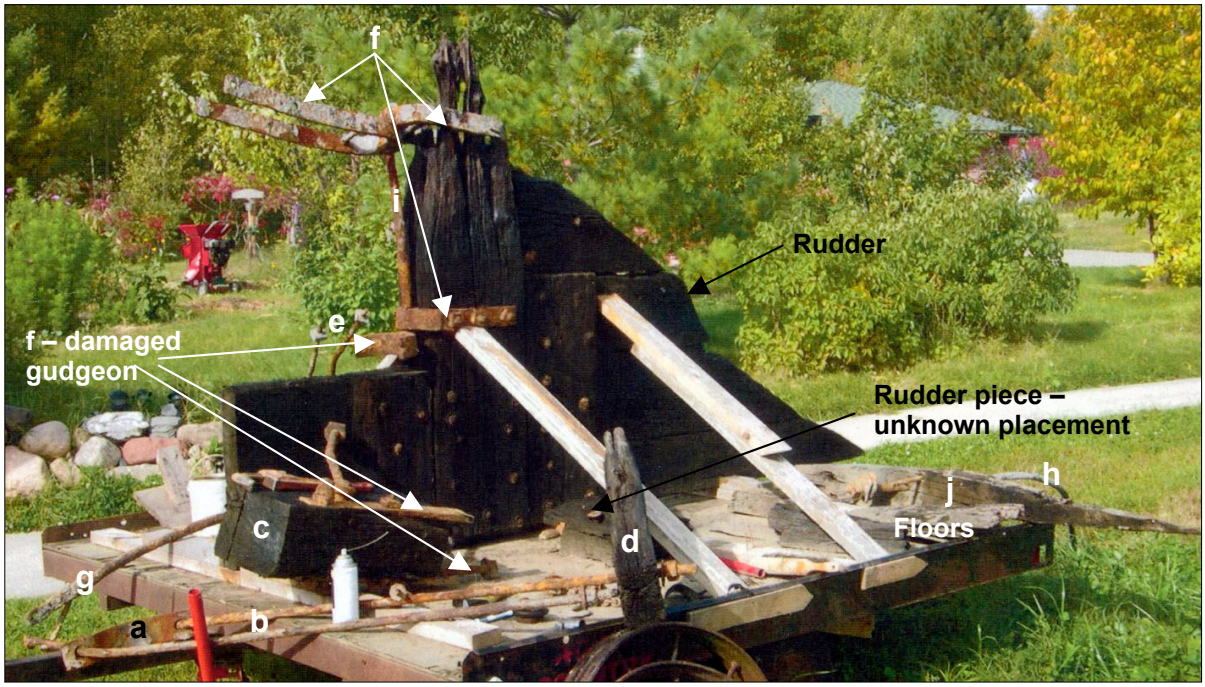
The rudder is a balanced type whereby 1/3 of its area lies forward of the pivot point. It was attached to the sternpost by four gudgeons (f) and a pintle (i) that was inserted through eyes on the gudgeons. The top three gudgeons are intact, while the lowest is broken, the remains of which are found on a piece of sternpost that was sawed off the wreck. Another metal rod, the rudder articulating arm (g), is now independent of the rudder system but *in situ*, its end was buried in sediment. Originally, one end would have gone through the starboard rudder aft of its pivot point and extended to the master (center) rudder and then to the port slave rudder. This rod allowed the rudders to move in consort. One more substantial component, a large wooden timber (j) with a rod (h) protruding through it, was removed from the wreck. MHM asserts that this piece is a portion of the starboard cylinder timber with one of its accompanying attachments.



a – metal plate
b – 2 rods attached to (a)
c – starboard sternpost
d – athwartships beam or block
e – 2 rods
f – gudgeons
g – rudder articulating arm
h – cylinder timber attachment

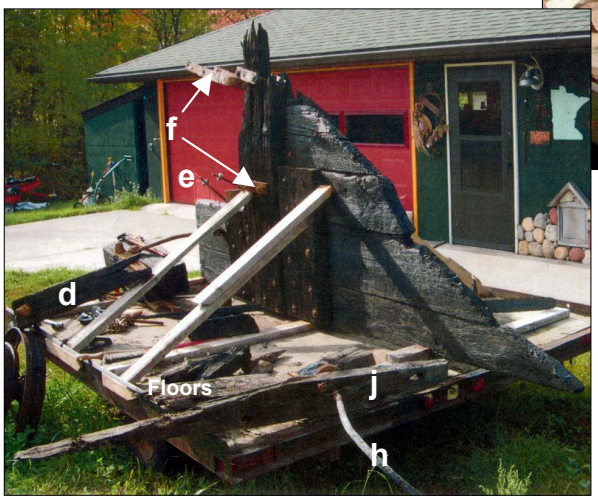
By Connie Pettersen.





a – metal plate
b – 2 rods attached to (a)
c – starboard sternpost
d – athwartships beam or block
e – 2 rods
f – gudgeons
g – rudder articulating arm
h – cylinder timber attachment
i – pintle
j – cylinder timber portion

By David Mather.

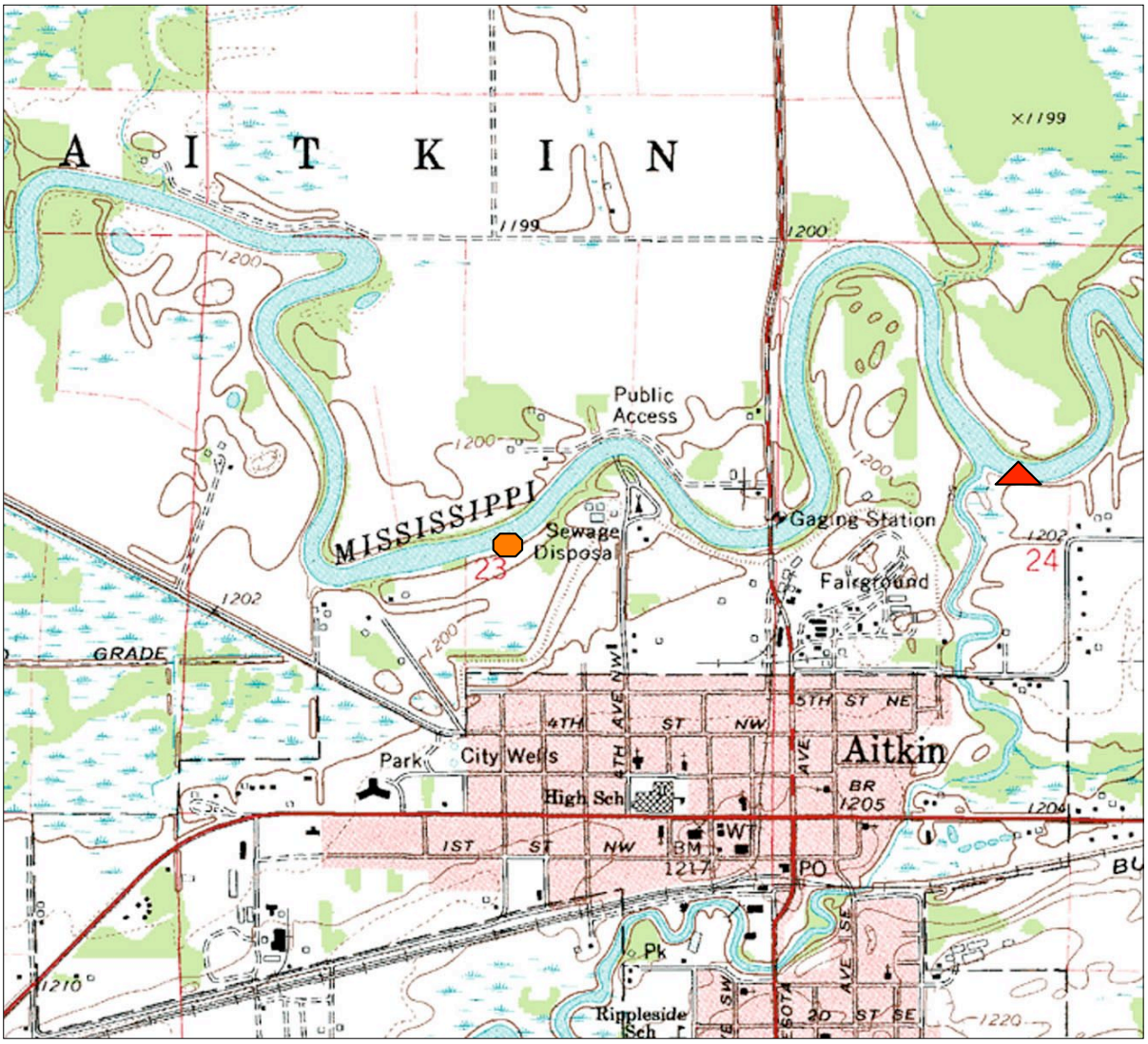


Note: The disarticulated pieces of the rudder, steering mechanism, and some stern area floors are sitting on a trailer in no order with other objects, including a pipe wrench, red pipe, paint can, spray can, and a chainsaw.

The destruction caused to the unique steamer wreck *Andy Gibson* by the violent removal of its starboard balanced slave rudder is extensive, tragic, permanent, and sadly, was preventable. The Abandoned Shipwreck Act (1987) provided the US Government with ownership of the submerged cultural resources "located within three nautical miles of the US coastline and in the internal navigable waters of the United States…that are embedded in submerged lands, abandoned shipwrecks that are embedded in coralline formations protected by a State, and abandoned shipwrecks that are on submerged lands and included in or determined eligible for the inclusion in the National Register of Historic Places." In turn, the US Government transferred its claim to these resources to other government bodies that owned the submerged lands where wrecks and other sites are located (Aubry 1997, 16). Therefore, the State of Minnesota, the entity that owns the bottom of the Mississippi River within the state, owns the *Andy Gibson* wreck site, the *Swan*, and any other historic submerged cultural resources found therein.

The State of Minnesota and its assigned representatives maintain the submerged cultural resources within its boundaries for the enjoyment and education of our citizens. The looting of *Andy Gibson* in 1967 and 2006 is especially harmful to the history of our State since the uniqueness of the site and its lack of documentation results in the loss of irretrievable archaeological information. The brief reconstruction here of the different parts of *Andy Gibson's* steering mechanisms will never be complete with the only surviving rudder torn from the wreck. MHM may never determine if *Andy Gibson's* rudder configuration is a style unique to Minnesota; we suspect it may be. But, without the rudder *in situ* and undamaged, reconstructing its original appearance is virtually impossible.

Appendix B



Andy Gibson Wreck Site

Swan Wreck Site

1973 Aitkin Quadrangle Map

From the Internet Archive.

Rev.: 03.31.97 # MINNESOTA ARCHAEOLOGICAL SITE FORM

OFFICE OF THE STATE ARCHAEOLOGISTSTATE HISTORIC PRESERVATION OFFICE
Fort Snelling History Center, St. Paul, MN 55111 (612) 725-2411 345 Kellogg Boulevard W., St. Paul, MN 55102 (612) 296-5434

OSA License #: 08–048, 08–049 SHPO RC #:

Date(s) of Fieldwork: August 30, 2008 ✓ New Site __ Site Update

SITE #: 21-AK0109 Site Name: *Andy Gibson* Field #:

LOCATIONAL INFORMATION *(attach USGS topographic quad and sketch map with site location outlined)*

County: Aitkin City/Twp. Name: Aitkin SHPO Region:

USGS 7.5' Quadrangle Map *(name and year):* Aitkin Quadrangle, 1973

Township: Aitkin Range: T 47 N R 27 W Section: 23 3 Sections (at least 2): NW 1/4, NW1/4, SE 1/4
Township: Range: Section: 3 Sections (at least 2):
Township: Range: Section: 3 Sections (at least 2):

UTM Site Coordinates *(use 1927 datum; identify center point only):*
Zone 15 Easting 445051 Northing 5154110

Other locational information:
Drive past the City of Aitkin compost site into the woods on the wide snow mobile and biking path; turn left at the "T"; go 40 yards; walk on path north to river 30 yards

SITE CHARACTERISTICS

Acreage: 0.12 Site Dimensions *(both horizontal and vertical/depth, in metric):* 40.2 m by 12.2 m by 2.4 m

Features (✓ *all that apply*): __ earthwork __ depression __ foundation ✓ other __ none
describe: steamer wreck: strakes, floors, king plank, keelson, bow, partial stern exposed, rudder removed 2006; starboard side gunwale imbedded in riverbank; extreme port side of wreck broken off and in river; wreck resting on and impaled by dock/cradle

Site Description *(✓ all that apply and describe):*
✓ single artifact __ artifact scatter __ lithic scatter __ earthwork/mound
✓ structural ruin __ rock alignment __ rock art __ cemetery/burial
__ standing structure (SHPO structure # if known): _____ __ other:
describe: steamer wreck in many pieces sitting on a dock structure

Inferred Site Function (*must specify*): A riverboat landing (Potter's Landing) that consists of a steamboat that carried cargo, supercargo, crew, and passengers on the Mississippi River resting on a dock or cradle originally intended to prevent the vessel from grounding/hogging during low water

Current Land Use *(✓ all that apply):*
__ cultivated __ woodland __ commercial __ unknown
__ fallow __ recreational __ industrial ✓ other: river/riverbank
__ grassland __ road __ residential

Surface Visibility
✓ excellent **(seasonal)** __ good __ fair __ poor
__ none

Degree of Disturbance *(✓ and describe):*
__ minimal ✓ moderate __heavy __ destroyed __ unassessed
describe disturbance type(s): rudder wrenched from stern by backhoe in unauthorized 2006 salvage

Current Threats to Site:
✓ erosion __ development __ agricultural __ none known ✓ other: ice, vandalism, wreck pilfering, floating debris

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SITE #: 21-AK0109 Site Name: *Andy Gibson* Field #:

CULTURAL/TEMPORAL AFFILIATION

(✓ all that apply; include level of certainty: 1 = confirmed; 2 = probable):

Period:
__ indeterminate
__ Pre-Contact (9500 BC - 1650 AD)
__ Contact (1650-1837)
✓-1 Post-Contact (1837-1945)

Pre-Contact Context: *(if unable to discern specific context, % here __)*

PaleoIndian Tradition __ indeterminate __ Folsom __ Lanceolate Point
__ Clovis __ Eastern Fluted __ other:

Archaic Tradition __ indeterminate __ Prairie __ Riverine
__ Shield __ Lake-Forest __ other:

Woodland Tradition __ indeterminate __ Fox Lake __ Laurel
__ Early __ Transitional __ Lake Benton
__ Brainerd __ Kathio __ Psinomani/Sandy Lake
__ Black Duck __ Havana Related __ Southeastern MN Late
__ other:

Plains Village __ indeterminate __ Cambria __ other:
__ Great Oasis __ Big Stone

Mississippian Tradition __ indeterminate __ Silvernale __ other:

Oneota Tradition __ indeterminate __ Blue Earth __ Orr __ other:

Contact Context: *(if unable to discern specific context, ✓ here __)*

American Indian __ indeterminate __ Eastern Dakota __ other:
__ Ojibwe __ Western Dakota

EuroAmerican __ indeterminate __ British __ other: ___
__ French __ Initial US

Post-Contact Context: *(if unable to discern specific context, ✓ here __)*

__ Indian Communities & Reservations (1837-1934)
__ Early Agriculture & River Settlement (1840-1870)
✓ Northern MN Lumbering (1870-1930s)
✓ Tourism & Recreation (1870-1945)
__ St. Croix Triangle Lumbering (1830s-1900s)
✓ Railroads & Agricultural Development (1870-1940)
__ Iron Ore Industry (1880s-1945)
__ Urban Centers (1870-1940)

Dating Methods *(✓ all that apply):*

__ artifact style/cross dating __ radiocarbon ✓ historic accounts __ Andreas atlas (1874)
__ Sanborn maps (list years): _____ __ plat maps (list years):
✓ other(s) (*specify*): construction characteristics, ledger book and receipt at the ACHS

Specify context dates *(if radiometric, cite lab no. and uncalib. date; note if AMS):* 1883-1892

MATERIALS PRESENT

Material Classes *(% all that apply):*

Ceramics	*Lithics*	*Biological Remains*	*Other Materials*
__ Aboriginal	__ projectile points	__ animal	__ glass
__ EuroAmerican	__ other flaked stone tools	__ human	✓ metal
	__ debitage	__ unidentified bone	__ FCR
	__ ground/pecked stone	__ floral	✓ other: wood

Additional information *(e.g., temper, charcoal type, raw material, etc.):*

SITE #: 21-AK0109 Site Name: *Andy Gibson* Field #:

Major Exotic Materials *(i.e., "exotic" relative to local area; % all that apply):*
__ catlinite __ native copper __ Hixton orthoquartzite
__ Knife River Flint __ obsidian __ other:

Diagnostic Type/Information *(e.g., Brainerd ceramics, machine-cut nails; describe decoration, function, manufacturer, etc.):*
Ceramic
Lithic
Glass
Metal engine fittings, machine–cutnails, fasteners, rods
Other wood: strakes, floors, stringers, futtocks, king plank, keelson, dock pilings, dock remains

Additional information:

ENVIRONMENTAL DATA

Major Drainage System
__ Cedar River __ Des Moines River __ Lake Superior __ Minnesota River
✓ Mississippi River *(N of MN River)* __ Red River __ Rainy River
__ Mississippi River *(S of MN River)* __ Missouri River __ St. Croix River

Watershed Index Map no. (MnDNR, Division of Waters, 1990): 10

Distance to Existing Water Source *(per USGS topographic map, in feet or miles):* 0

Ancient/Former Water Feature *(name, type and distance to such feature):* 0

Topographic Setting *(✓ all that apply):*

Upland	*Riverine*	*Lacustrine*
__ general upland	__ alluvial fan	__ inlet/outlet
__ bluff edge	__ terrace	__ peninsula
__ hilltop	__ stream-stream junction	__ island
__ glacial beach ridge	__ bluff-base	__ isthmus
__ wetland	__ cave/rockshelter	__ shoreline
__ other: _____	✓ other: riverbank	__ other:

HISTORIC SITES ONLY:

Historic setting: __ *rural* __ *urban* ✓ *other:* steamboat landing

Type(s): __ *industrial* ✓ *commercial* __ *domestic* __ *government* __ *other:*

Historic transportation route (e.g., road, waterway, rail); identify type, direction & distance: Mississippi River

OWNERSHIP INFORMATION

Ownership Type *(✓ all that apply):*
__ federal ✓ state __ local __ tribal __ private __ unknown

Land Owner *(name and address)* : State of Minnesota (Mississippi River bottom)

Significant historic owner(s) and period(s) of ownership, if known: Constructed/owned by E. B. Lowell, 1883–1891; Potter Company 1891-1892

Year and Source of Ownership Information *(e.g., plat map, recorder's office, etc.): NewsHopper*, 8-9, August 19, 2006; *The Mighty Mississippi*, 2, 1977.

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SITE #: 21-AK0109 Site Name: *Andy Gibson* Field #:

INVESTIGATOR/REPORTER INFORMATION

Type(s) of Investigation *(✓ all that apply):*
✓ reconnaissance ✓ evaluation ✓ data recovery ✓ other: photography
Methods/techniques employed *(✓ all that apply):*
__ informant report __ small diameter soil coring (. 1" diameter)
✓ surface survey __ geomorphological survey *(specify)*:
__ shovel testing __ geophysical survey *(specify)*:
__ excavation units ✓ other(s): brief examination of starboard side in riverbank using a trowel; measurement of floors and strakes

Informant Name and Address: David Mater, National Register Archaeologist, SHPO, Minnesota History Center

Artifact Repository *(name and accession nos.):*

Report Citation:
Hall, Wes, Douglas Birk, and Sam Newell. 1997. *Shipwrecks of Minnesota's Inland Lakes and Rivers: A Submerged Cultural Resources Survey*. Minnesota Historical Society, State Historic Preservation Office, St Paul. 52, 82–83

Major Bibliographic Reference(s) to Site:
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Pettersen, Connie. 2006. A page out of Aitkin's riverboat heritage returns from a watery grave. *NewsHopper*. Aitkin, MN. 19 August, 8–9.

Principal Investigator *(name and affiliation):* Ann Merriman, Maritime Heritage Minnesota; Christopher Olson, Maritime Heritage Minnesota

ADDITIONAL NOTES *(use space below or attach extra sheets, as needed)*

MAPS *(attach USGS topographic quad and sketch map with site location outlined)*

Form Completed by *(name and date):* Ann Merriman and Christopher Olson October 30, 2008

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